March 19, 2002

Mr. Kevin Horrell
Cardinal/Lipps Printing Services
341 Vincennes Street
New Albany, IN 47150

Dear Mr. Horrell:

Re: Exempt Construction and Operation Status,
043-15409-00032

The application from Cardinal/Lipps Printing Services, received on January 10, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following offset lithographic printing operation, to be located at 341 Vincennes in New Albany, Indiana 47150, is classified as exempt from air pollution permit requirements:

(a) One (1) offset lithographic printing operation, including:

(1) One (1) Mitsubishi non-heat offset lithographic press, identified as Press 1, with a maximum design throughput rate of 123,116.54 million (MM) square inches per hour,

(2) One (1) Heidelberg 240 non-heat offset lithographic press, identified as Press 2, with a maximum design throughput rate of 55,591.66 million (MM) square inches per hour, and

(3) One (1) Heidelberg SM74 non-heat offset lithographic press, identified as Press 3, with a maximum design throughput rate of 52,886.38 million (MM) square inches per hour.

(b) Two (2) natural gas fired space heaters, each with a maximum heat input rate of 0.40 MMBtu/hr.

There are no applicable requirements associated with the source.

This exemption shall supersede registration (043-9343-00032) issued on November 2, 1998.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

SDF
cc: File - Floyd County
Floyd County Health Department
Air Compliance - Ray Schick
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	Cardinal/Lipps Printing
Source Location:	341 Vincennes, New Albany, Indiana 47150
County:	Floyd
SIC Code:	2752
Exemption No.:	043-15409-00032
Permit Reviewer:	SDF

The Office of Air Quality (OAQ) has reviewed an application from Cardinal/Lipps Printing relating to the construction and operation of a lithographic printing operation.

Request

On January 10, 2002, Cardinal/Lipps Printing submitted an application to permit the following lithographic printing equipment.

(a) One (1) offset lithographic printing operation, including:

(1) One (1) Mitsubishi non-heat offset lithographic press, identified as Press 1, with a maximum design throughput rate of 123,116.54 million (MM) square inches per hour,

(2) One (1) Heidelberg 240 non-heat offset lithographic press, identified as Press 2, with a maximum design throughput rate of 55,591.66 million (MM) square inches per hour, and

(3) One (1) Heidelberg SM74 non-heat offset lithographic press, identified as Press 3, with a maximum design throughput rate of 52,886.38 million (MM) square inches per hour.

(b) Two (2) natural gas fired space heaters, each with a maximum heat input rate of 0.40 MMBtu/hr.

Existing Approvals

This source has been operating under registration (043-9343-00032) issued on November 2, 1998.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that this exemption be approved. This recommendation is based on information derived from the application and additional information submitted on February 27, 2002.

Emission Calculations

UNRESTRICTED POTENTIAL TO EMIT DUE TO THE MODIFICATION:

The emissions generated by the proposed printing operation are volatile organic compounds (VOC) and hazardous air pollutants (HAP) from the printing presses, and combustion emissions from the source space heaters.

The following is a summary of the source unrestricted potential to emit. The detailed calculations follow the summary table.

Unit	PM tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (ton/yr)	CO (tons/yr)
Ink	-	-	-	-	2.93	-
Blanket Wash	-	-	-	-	4.28	-
Fountain Solution	-	-	-	-	0.63	-
Combustion	neg.	neg.	neg.	0.40	neg.	0.30
Total	**neg.**	**neg.**	**neg.**	**0.40**	**7.84**	**0.30**

HAP	ton/yr
Cumene	0.08
Ethylene Glycol	0.04
Hexane	0.01
Naphtha	neg.
Xylene	**0.10**
Total	**0.23**

Ink VOCs:

The following calculations determine the ink VOC unrestricted potential to emit (UPTE) based on use of the worst case inks, the respective maximum lb ink/MMin^2, and the maximum coating area per year.

VOC (tons/yr) = MMin^2/yr * 2 lb ink/MMin^2 * 0.01 lb VOC/lb ink * 1/2000 ton VOC/lb VOC

Unit	MMin^2/yr	VOC (ton/yr)
Mitsubishi	123,116.54	1.23
240 Heidelberg	117,818.50	1.18
Heidelberg SM74	52,886.38	0.52
	Total	**2.93**

Blanket Wash VOCs:

The following calculations determine the blanket wash unrestricted potential to emit (UPTE) based on the VOC density of the various materials and the respective maximum annual usage rates.

VOC (tons/yr) = VOC density (lb VOC/gal) * max. usage (gal/yr) * 1/2000 (tons VOC/lb VOC)

Material	VOC Density (lb VOC/gal)	Maximum Usage (gal/yr)	VOC (ton/yr)
Super Ink Saver	4.76	52.00	0.12
Omni Plate Cleaner	3.44	1.50	neg.
Scratch Remover	1.28	3.80	neg.
SuperKlene 1C	5.04	13.00	0.03
Eezy-Klene	0.81	8.20	neg.
PowerKlene	6.69	1140.00	3.81
MRC-K	6.10	96.50	0.29
FSG	0.07	0.25	neg.
Preparation N Plus	5.06	13.00	0.03
		Total	**4.28**

Fountain Solution VOCs:

The following calculations determine the fountain solution unrestricted potential to emit (UPTE) based on the VOC density of the various materials and the respective maximum annual usage rates.

VOC (tons/yr) = VOC density (lb VOC/gal) * max. usage (gal/yr) * 1/2000 (tons VOC/lb VOC)

Material	VOC Density (lb VOC/gal)	Maximum Usage (gal/yr)	VOC (ton/yr)
Fountain Concentrate 2451	2.21	97.00	0.11
Fountain Concentrate 3451	0.73	111.30	0.04
Alkaless	6.57	147.30	0.48
		Total	**0.63**

Combustion Emissions:

The following calculations determine the space heater emissions based on natural gas combustion, a combined maximum capacity of 0.80 MMBtu/hr, AP-42 emission factors, emissions before controls, and 8760 hours of operation.

0.80 MMBtu/hr * 8760 hr/yr * 1 E6 Btu/MMBtu * 1/1000 cf/Btu * 1/1E6 MMcf/cf * Ef lb poll/MMcf * 1/2000 ton poll/lb poll = ton poll/yr

	PM 7.6 lb/MMcf	PM10 7.6 lb/MMcf	SO2 0.6 lb/MMcf	NOx 100 lb/MMcf	VOC 5.5 lb/MMcf	CO 84 lb/MMcf
ton/yr	**neg.**	**neg.**	**neg.**	**0.40**	**neg.**	**0.30**

Source HAPs:

The following calculations determine the source HAP unrestricted potential to emit (UPTE) based on the maximum hourly rate and 8760 hours per year.

HAP (tons/yr) = HAP lb/hr * 8760 hr/yr * 1/2000 ton/lb

HAP	lb/hr	HAP (ton/yr)
Cumene	0.01800	0.08
Ethylene Glycol	0.01000	0.04
Hexane	0.00300	0.01
Naphtha	0.00015	neg.
Xylene	0.02300	**0.10**
	Total	**0.23**

EMISSIONS AFTER CONTROLS:

The source emissions are uncontrolled. Thus, the emissions after controls equal the emissions before controls.

Unit	PM tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (ton/yr)	CO (tons/yr)
Ink	-	-	-	-	2.93	-
Blanket Wash	-	-	-	-	4.28	-
Fountain Solution	-	-	-	-	0.63	-
Combustion	neg.	neg.	neg.	0.40	neg.	0.30
Total	**neg.**	**neg.**	**neg.**	**0.40**	**7.84**	**0.30**

HAP	ton/yr
Cumene	0.08
Ethylene Glycol	0.04
Hexane	0.01
Naphtha	neg.
Xylene	**0.10**
Total	**0.23**

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the PTE before controls due to the proposed source based on the above estimated emissions calculations. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	neg.
PM-10	neg.
SO_2	neg.
VOC	7.84
CO	0.30
NO_x	0.40

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

Pollutant	Potential To Emit (tons/year)
Single HAP	0.10
Total Combined HAPs	0.23

The VOC PTE is less than 10 tons per year, single HAP PTE is less than 1 ton per year, and the combined HAP PTE are less than 2.5 tons per year. Therefore, the source qualifies for a Exemption pursuant to 326 IAC 2-1.1-3(d)(1)(D) and (H).

County Attainment Status

The source is located in Floyd County.

Pollutant	Status
PM_{10}	attainment or unclassifiable
SO_2	attainment or unclassifiable
NO_2	attainment or unclassifiable
Ozone	attainment or unclassifiable
CO	attainment or unclassifiable
Lead	attainment or unclassifiable

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Floyd County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) Floyd County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions

Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

New Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Unit	PM (tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Single HAP (tons/yr)	Comb. HAPs (tons/yr)
Source	-	-	-	0.40	7.84	0.30	0.10	0.23

PSD Levels	250	250	250	250	250	250	-	-
Part 70 Levels	-	100	100	100	100	100	10	25

(a) This new source is not a major PSD stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more and it is not one of the 28 listed source categories.

(b) This new source is not a Title V major stationary source because no criteria pollutant potential to emit (PTE) exceeds the applicable level of 100 tons/yr, no single hazardous air pollutant PTE exceeds the applicable levels of 10 tons/yr, and the combined hazardous air pollutant PTE does not exceed the applicable level of 25 tons/yr.

Federal Rule Applicability

New Source Performance Standards (NSPS):

40 CFR 60.430, Subpart QQ - Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing:

This standard applies to each publication rotogravure printing press that commences construction, modification, or reconstruction after October 28, 1980.

Although the presses are constructed after October 28, 1980, this rule does not apply because the presses are offset lithographic presses, not publication rotogravure presses.

National Emission Standards for Hazardous Air Pollutants (NESHAPs):

40 CFR 63.820, Subpart KK - National Emission Standard for the Printing and Publishing Industry:

This rule applies to major sources of hazardous air pollutants (HAPs) at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated.

The presses of this source are not subject to this rule because the presses are offset lithographic presses, not publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses.

State Rule Applicability

Entire State Rule Applicability:

326 IAC 2-4.1 (HAP Major Sources)

This source is not subject to the requirements of 326 IAC 2-4.1 because no single hazardous air pollutant (HAP) emissions exceed 10 tons per year, and the combined HAP emissions are less than 25 tons per year.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because although it is located in one of the listed source counties, the source does not have more than 10 tons per year of either NOx or VOC.

Individual State Rule Applicability

326 IAC 8-2-5 (Paper Coating Operations)

326 IAC 8-2-5 applies to web coating or saturation processes of paper, plastic, metal foil, and pressure sensitive tapes and labels.

This offset lithographic printing operation is not subject to this rule because the offset lithographic printing process does not include web coating or saturation of paper, plastic, metal foil, or pressure sensitive tapes and labels.

326 IAC 8-5-5 (Graphic Arts Operations)

326 IAC 8-5-5 applies to packaging rotogravure, publication rotogravure, and flexographic printing sources.

This rule does not apply because the printing operation is a offset lithographic printing operation, not a packaging rotogravure, publication rotogravure, or flexographic printing operation.

326 IAC 8-7-2 (Specific VOC Reduction Requirements for Lake, Porter, Clark, or Floyd Counties)

This rule applies to stationary sources located in Lake, Porter, Clark, or Floyd counties which emit or have the potential to emit VOC at levels equal to or greater than 100 tons per year for Clark and Floyd Counties.

This rule also applies to sources that have coating facilities which emit or have the potential to emit 10 tons per year of VOC for Floyd, Clark, Lake, or Porter County.

Cardinal/Lipps Printing Services is not subject to this rule because the source potential to emit is less than 10 tons per year.

326 IAC 8-1-6 (State BACT Requirements)

Although there are no other Article 8 rules that apply to this source, 326 IAC 8-1-6 does not apply because there are no facilities with potential VOC emissions equal to or greater than the applicable level of 25 tons per year.

Conclusion

The proposed offset lithographic printing operation shall be constructed and operated pursuant to the requirements specified in Exemption 043-15409-00032.